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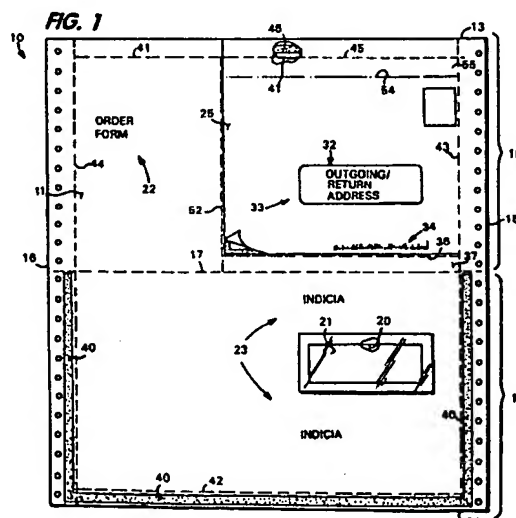
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(54) **Mailer with reply envelope.**

(57) A mailer type business form is formed from an intermediate made using a first large quadrate sheet of paper (10) and a second much smaller quadrate sheet (25). A fold line (17) divides the intermediate into first and second equal size panels (18, 19), the second panel having a cut out window (20) and the first panel having the second sheet placed over a portion thereof to form a return envelope (38). A reply address (31) is printed on the second sheet at a portion thereof in alignment with the cut out window when the first sheet is V-folded about the fold line. A repositionable adhesive label (32) is applied over the reply address (31), and the mailer is sealed with adhesive (40) along the edges of the second panel (19). The mailer is manufactured with a minimum number of operations in a relatively simple manner.



Mailers are a popular type of business form. It is often desirable for a mailer to be able to convey a great deal of confidential information, while providing a reply envelope to allow the recipient of the mailer to mail order forms, questionnaires, or like documents back to the original sender of the mailer.

United States patent 4,706,877 shows a particular type of mailer that is constructed with a built in return envelope that is very easy to use. The built in return envelope includes a repositional label which covers a reply address on the reply envelope part of the mailer. The repositional label has the outgoing addressee information printed thereon and is visible through a window in a covering ply. Once the mailer is opened by the recipient, the repositional label can be removed from its position covering the reply address and placed on the return address portion of the reply envelope.

While the mailer of U.S. patent 4,706,877 is advantageous, it has a few drawbacks thereto, and is constructed in a manner that is not as simple as desired. The mailer of the 4,706,877 patent uses sheets that are run from the same size press so that two continuous webs are glued together to form a return envelope, which must be of a predetermined size. In contrast to such a construction, according to the present invention the return envelope can be of various sizes, and is made of a second sheet of paper having dimensions much less than one of the panels of a first sheet of paper, so as to minimize paper waste. The mailer produced according to the invention also is easier to open because there is only a small portion where there are three plies, rather than three plies all around all three openable sides as in the 4,706,877 construction. Also, the mailer according to the present invention allows more room for internal indicia, and may be produced merely using a press, "85" machine, and Labelaire™ machine, that is not requiring a collator such as is typically utilized in the construction of a mailer such as in U.S. Patent No. 4,706,877.

The invention comprises an intermediate for forming a mailer, a mailer so formed, and a method of manufacture of a mailer. The mailer that is produced according to the present invention has a large amount of interior space for printing of confidential information, is easy to open, and provides an easy to use return envelope.

According to one aspect of the present invention an intermediate for a mailer type business form is provided. The intermediate comprises the following elements: A first generally quadrate sheet of paper having parallel first and second edges, and parallel third and fourth edges perpendicular to the first and second edges. A fold line substantially bisecting the third and fourth edges and parallel to the first and second edges, defining first and second panels. Means providing a cut out window in the second pan-

el. A reply envelope forming quadrate second sheet having dimensions substantially less than the dimensions of the first sheet. A first adhesive pattern connecting the second sheet to the first sheet first panel to form a reply envelope. Reply address indicia printed on the second sheet at a portion thereof in alignment with the cut out window when the first sheet is V-folded about the fold line. A repositional adhesive label applied to the second sheet covering the reply address, and having an outgoing address thereon. A second adhesive pattern for connecting the first panel to the second panel along the edges thereof when V-folded about the fold line. And, lines of weakness formed in the first and second panels adjacent the edges of the first sheet for allowing ready opening of a mailer formed by V-folding about the fold line and adhesive attachment by the second adhesive.

The reply address is preferably in a readable line, which is parallel to the fold line. The return envelope has a flap with rewettable adhesive, and is connected at a top portion thereof by a line of weakness formed in both the first and second panels, when the mailer is opened along the line of weakness an adhesive strip holding the panels together at that point being removed so that an open top of the reply envelope is provided. The second sheet has only about two-thirds the dimensions of the first sheet, and a bottom stub is typically provided at the bottom of the return envelope between it and the fold line. U-shaped glue/adhesive patterns are provided for forming the reply envelope, and also for sealing the edges of the first and second panels together to form a mailer constructed from the intermediate.

The invention also comprises a mailer constructed from the intermediate described above. The mailer is constructed merely by V-folding about the fold line and sealing adhesive patterns, the repositional label with the outgoing address being visible through the window cutout in the second panel. When the mailer is received by the outgoing addressee, he or she opens it, detaches the reply envelope from the first panel, repositions the repositional adhesive label so that it is in the return address portion of the reply envelope rather than in the addressee portion (thereby covering the printed reply address), and mails it back to the original sender. The original sender may then use the repositional label as a shipping label for a product to be sent to the original outgoing addressee.

According to yet another aspect of the present invention, a method of constructing a mailer type business form is provided. The method comprises the following steps: (a) Forming a fold line in the first sheet to define first and second panels, and forming a die cut window in the second panel. (b) Applying an adhesive pattern to the first panel of the first sheet for forming a reply envelope. (c) Printing a reply address on a second sheet. (d) Applying the second sheet to the first sheet in registry with the reply envelope ad-

hesive to form a reply envelope in the first panel, having dimensions substantially less than the first panel. (e) Forming perforations in the first and second panels. (f) Applying adhesive for connection of the first and second panels together adjacent the edges thereof. (g) Blowing on a repositional adhesive label to cover the printed reply address on the second sheet. And, (h) V-folding the first sheet about the fold line so that the cut out window is over the repositional adhesive label, and so that the adhesive connecting the panels together is activated to form a final mailer.

It is primary object of the present invention to provide a simple and advantageous mailer, intermediate for construction of the mailer, and method of constructing the mailer. While this and other objections of the invention will become clear from a detailed description of the invention and from the appended claims.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIGURE 1 is a top plan view of the "inside" face of a mailer type business form intermediate according to the invention;

FIGURE 2 is a view like that of FIGURE 1 of the "outside" face of the mailer intermediate;

FIGURE 3 is a top plan view of a constructed mailer according to the invention;

FIGURE 4 is a top perspective view, with portions of the "second" sheet of the reply envelope cut away for clarity of illustration, of an exemplary reply envelope of the mailer of FIGURES 1-3;

FIGURE 5 is a rear view of the return envelope of FIGURE 4;

FIGURE 6 is a front view of the return envelope of FIGURE 4 showing the repositional label having been removed to the return address position, and the reply address clearly visible; and

FIGURE 7 is a schematic representation of exemplary method steps that may be utilized in the practice and the method according to the invention, for producing the mailer of FIGURES 1-3.

### **DETAILED DESCRIPTION OF THE DRAWINGS**

An exemplary intermediate mailer type business form according to the present invention is seen in FIGURES 1 and 2, made from a first sheet of paper 10 having a first face 11 which will become the inside face of the mailer, and a second face 12 (FIG. 2). The single sheet of paper 10 is quadrate in configuration having first and second parallel edges 13, 14 and third and fourth parallel edges 15, 16, the edges 15, 16 being perpendicular to the edges 13, 14. A fold line 17 (e.g., a score, perforation or the like) essentially bisects the edges 15, 16 and is parallel to the edges 13, 14. The fold line 17 forms the sheet 10 into a first

panel 18 and a second panel 19.

A cutout window 20, which preferably is covered by a transparent "window" patch 21, is formed in second panel 19. On the first face 11 a great deal of information is printed, typically confidential information. For example, an order form 22 (see FIG. 1) could be printed in one part, and other instructional or like informational indicia 23 printed on other parts. The inside of the mailer to be constructed from the intermediate 10 has a great deal of area that can be printed.

Also forming part of the intermediate 10 of a mailer type business form according to the invention is a reply envelope formed from a quadrate second paper sheet 25 (see FIG. 1) which has dimensions substantially less than the dimensions of the first panel 18, so as to allow for printing of a great deal of additional indicia, such as the order form indicia 22, on the first panel 18. A first adhesive pattern -- seen by the U-shaped pattern 27 in FIGURE 4 -- connects the second sheet 25 to a part of the first panel 18, the adhesive of the pattern 27 being pasted pocket adhesive or the like.

Printed on the second face 12 of the first sheet 10 (see FIG. 2) is the outgoing return address 29, and postage indicia 30. Printed on the second sheet 25 is reply address indicia 31 (see FIG. 6), printed the same distance from the fold line 17 as the cutout 20 and in alignment therewith so that when the intermediate is folded about the fold line 17 the area of the reply address 31 is visible through the cutout 20. However, the reply address 31 itself is not visible when the mailer is initially formed because a repositional adhesive label 32 (see FIGS. 1, 3 and 4) having outgoing address information 33 printed thereon, covers the reply address area 31 so that it is visible through the window 20. The repositional adhesive for the label 32 may be of any conventional type, such as sold by Moore Business Forms, of Lake Forest, Illinois, under the trademark CLEANTAC. Note that the second sheet 25 also may have reply address indicia printed thereon in the form of a bar code as indicated at 34 in FIGURE 1.

As seen in FIGURE 1, the second sheet 25 has dimensions of about two-thirds those of the first panel 18. Typically, a line of weakness such as a perforation 36 is provided at the bottom of the sheet 25 between it and the fold line 17. The dimension of the stub 37 formed between the lines 36, 17 determines the height of the reply envelope 38 (see FIGS. 4-6) formed from the second sheet 25 and the underlying portion of the first panel 18 to which it is adhesively secured by the adhesive pattern 27.

The sheet 10 also comprises a second adhesive pattern, such as shown by the U-shaped pattern 40 in FIG. 1, which may be heat sealable glue, for sealing the panels 18, 19 together adjacent their edges. While the pattern 40 may be applied on one or both

of the panels 18, 19, the preferred construction illustrated in FIGURE 1 illustrates portions of the pattern 40 being provided adjacent both the third and fourth edges 15, 16 and the second edge 14 (remote from the fold line 17). In order to facilitate ready opening of the mailer constructed from the intermediate of FIGURES 1 and 2, lines of weakness -- such as the perforation lines 41, 42, 43 and 44 -- may be provided adjacent each of the edges 13 through 16. Note that the perforation line 41 has an extension 45 into the second sheet 25.

The mailer 49 illustrated in FIGURE 3 is constructed from the intermediate of FIGURES 1 and 2 simply by V-folding about the fold line 17 so that the portions of face 11 are in engagement with each other, with the adhesive pattern 40 sealed. As can be seen in FIGURE 3, the outgoing address 33 (and the repositional adhesive label 32) is visible through the cutout 20.

When the outgoing addressee gets the mailer 49, he or she detaches along the perforations 41, 42, 43 and 44 to open up the mailer. Except for that portion of the mailer where the second and first sheets overlap adjacent the first edge 13, there is only a double thickness of material so that the mailer 49 is easy to open up. The sheet 10 also preferably has the perforation lines 51, 52 (see FIG. 2) formed therein to facilitate detachment of the return envelope 38 once the mailer 49 has been opened up, including removal of the stubs 53 and 37.

Once the return envelope 38 has been detached from the rest of the mailer 49, it can be stuffed as with the order form 22 portion of the first panel 18, a check, or the like, the reply envelope 38 being shown as a top opening envelope. Note that this top opening envelope 38 has a fold line 54 (see FIGS. 1 and 4) forming the flap 55 therefor, which has rewettable adhesive 56 (see FIG. 5) or the like formed thereon so that the flap 55 can be folded over and then sealed in place to form a sealed reply envelope 38 as illustrated in FIGURE 6. Also, in addition to stuffing the return envelope 38 and sealing it, the addressee takes off the repositional label 32 and places it to the return address portion of the reply envelope 38 (see FIG. 6), the reply address 31 then being uncovered and visible on the front face (25) of the return envelope 38. When the original addressee receives the reply envelope 38, he or she can remove the repositional adhesive label 32 again and place that on a package to be sent to the original outgoing addressee.

FIGURE 7 schematically illustrates a method of producing a mailer 49 according to the invention. A first sheet 10 of the mailer is formed from a web of paper that is preferably run on a 30.5 cms (12") press. Here, as indicated by box 60, the perfs 51, 52, and the like, can be formed on the press, as by using a CHEMEX plate. The web then proceeds to stage 61 where it is processed through a tight web machine

where the heat seal pattern (40) is applied. Then, the sheet 10, in web form, passes to a stage 62 where the die cut window 20 is constructed, and then it passes to a stage 63 where pasted pocket adhesive 27, 46 for the reply envelope 38 is applied. Meanwhile, the second sheet 25 is mounted on a patch unwind spindle and every 14 cms (five and one-half inches) or so a sheet is cut from a web, as indicated in stage 64.

Stage 66 indicates where the sheets 10, 25 are registered to form the return envelope 38, using form-a-liner punching, which is then slit off. This combined web (67) is then fed to a perfling station 68 where marginal perfs 41 through 45 are applied, and then it passes to a stage 69 where a glue patch is supplied around the cutout 20 on face 11 and the transparent window 21 is put in place. Ultimately (further perfling may be done), the web passes to stage 70 where the web is folded into pad form, and then is passed to stage 71 where the repositional adhesive label 32 is blown on utilizing a Labelaire™ machine. Finally, the pad form of mailers is fed to stage 72 where sheet 10 is V-folded about fold line 17 and the adhesives heat sealed to form the mailer 49.

It will thus be seen that according to the present invention an advantageous mailer, intermediate, and method of construction thereof have been provided. While the invention has been herein shown and described in what is presently conceived to be the most practical and preferred embodiment thereof, it will be apparent to those of ordinary skill in the art that many modifications may be made thereof within the scope of the invention, which scope is to be accorded the broadest interpretation of the appended claims so as to encompass all equivalent structures and procedures.

## Claims

1. An intermediate for a mailer type business form, comprising:
  - a first generally quadrate sheet of paper (10) having parallel first and second edges (13, 14), and parallel third and fourth edges (15, 16) perpendicular to the first and second edges;
  - a fold line (17) substantially bisecting said third and fourth edges and parallel to said first and second edges, defining first and second panels (18, 19);
  - means providing a cut out window (20) in said second panel;
  - a reply envelope forming quadrate second sheet (25) having dimensions substantially less than the dimensions of said first sheet;
  - a first adhesive pattern (27) connecting said second sheet to said first sheet, first panel (18) to form a reply envelope (38);
  - reply address indicia (31) printed on said

- second sheet at a portion thereof in alignment with said cut out window when said first sheet is folded about said fold line;
- a repositional adhesive label (32) applied to said second sheet covering said reply address (31), and having an outgoing address (33) thereon;
- a second adhesive pattern (40) for connecting said first panel to said second panel along the edges thereof when folded about said fold line (17); and
- lines of weakness (41 - 45) formed in said first and second panels adjacent said edges of said first sheet for allowing ready opening of a mailer formed by folding about said fold line and adhesive attachment by said second adhesive.
2. A mailer type business form comprising:
    - a first generally quadrate sheet of paper (10) having parallel and aligned first and second edges (13, 14), and parallel third and fourth edges (15, 16) perpendicular to said first and second edges; said first sheet V-folded about a fold line to form first and second panels (18, 19);
    - means providing a cut out window (20) in said second panel (19);
    - a reply envelope (38) formed by a quadrate second sheet (25) having dimensions substantially less than the dimensions of said first sheet, and adhesively secured by a first adhesive pattern (27) to said first sheet first panel (18) to form a reply envelope;
    - reply address indicia (31) printed on said second sheet at a portion thereof in alignment with said cut out window (20) of said second panel;
    - a repositional adhesive label (32) applied to said second sheet covering said reply address (31), and having an outgoing address (33) thereon;
    - a second adhesive pattern (40) for connecting said first panel to said second panel along the edges thereof; and
    - lines of weakness (41 - 45) formed on said first and second panels adjacent said edges of said first sheet inside of said second adhesive pattern, for allowing ready opening of said mailer.
  3. An intermediate or mailer as recited in claim 1 or claim 2 characterised in that said reply address indicia (31) is readable in a line, said readable line being parallel to said fold line (17).
  4. An intermediate or mailer as recited in any of claims 1 to 3 characterised by a third adhesive pattern (46) connecting said second sheet to said first sheet along said first edge (13) of said first sheet, and detachable from said reply envelope when said first and second panels (18, 19) are detached at said lines of weakness (41 - 45).
  5. An intermediate or mailer as recited in any of claims 1 to 4 characterised in that said return envelope includes a flap (55), and further comprising a fourth pattern of adhesive (56) formed on said flap.
  6. An intermediate or mailer as recited in any of claims 1 to 5 characterised in that wherein said first adhesive pattern (27) has a U-configuration oriented, with respect to said reply address indicia (31), so as to provide an open top of said reply envelope.
  7. An intermediate or mailer as recited in any of claims 1 to 6 characterised in that said second adhesive pattern (40) comprises a U-configuration being provided adjacent said third and fourth edges in at least one of said panels, and adjacent either said second or first edge.
  8. An intermediate or mailer as recited in any of claims 1 to 7 characterised in that said second adhesive pattern comprises heat seal adhesive disposed adjacent said second edge, and adjacent said third and fourth edges on said second panel.
  9. An intermediate or mailer as recited in any of claims 1 to 8 characterised in that said second sheet (25) has approximately two-thirds the area of said first panel (18).
  10. An intermediate or mailer as recited in any of claims 1 to 9 characterised by perforations (36) disposed adjacent said fold line (17) in said first panel (18), between said second sheet/reply envelope (25) and said fold line (17).
  11. A method of forming a mailer type business form with a built in reply envelope, utilizing a first sheet of paper having first quadrate dimensions of first and second panels thereof, and a second sheet of paper having second quadrate dimensions much less than the first dimensions, comprising the steps of:
    - (a) forming a fold line in the first sheet to define first and second panels, and forming a die cut window in the second panel;
    - (b) applying an adhesive pattern to the first panel of the first sheet for forming a reply envelope;
    - (c) printing a reply address on a second sheet;
    - (d) applying the second sheet to the first sheet in registry with the reply envelope adhesive to form a reply envelope in the first

panel, having dimensions substantially less than the first panel;

(e) forming perforations in the first and second panels;

(f) applying adhesive for connection of the first and second panels together adjacent the edges thereof; 5

(g) blowing on a repositional adhesive label to cover the printed reply address on the second sheet; and 10

(h) folding the first sheet about the fold line so that the cut out window is over the repositional adhesive label, and so that the adhesive connecting the panels together is activated to form a final mailer. 15

12. A method as recited in claim 11 comprising the further step of opening the mailer by tearing along the perforations; removing the reply envelope from the first panel; removing the repositional label from its position covering the reply address, and placing it on a return address portion of the reply envelope; stuffing the reply envelope; sealing the reply envelope; and returning the reply envelope to the reply addressee. 20 25

13. A method as recited in claim 12 comprising the further step of, upon receipt of the reply envelope removing the repositional label therefrom, and applying the repositional label to a package and sending the package to the original outgoing addressee of the mailer. 30

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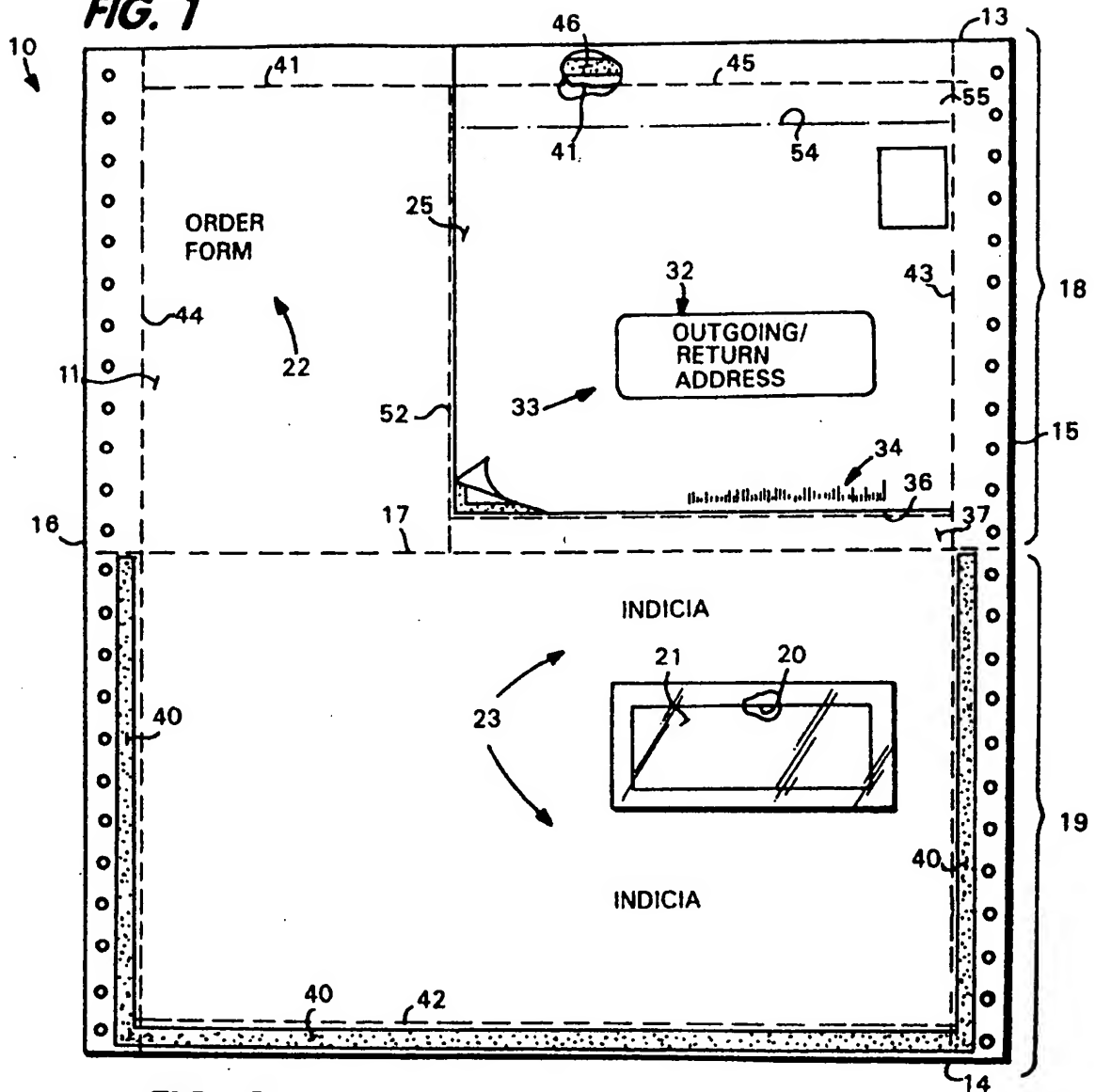
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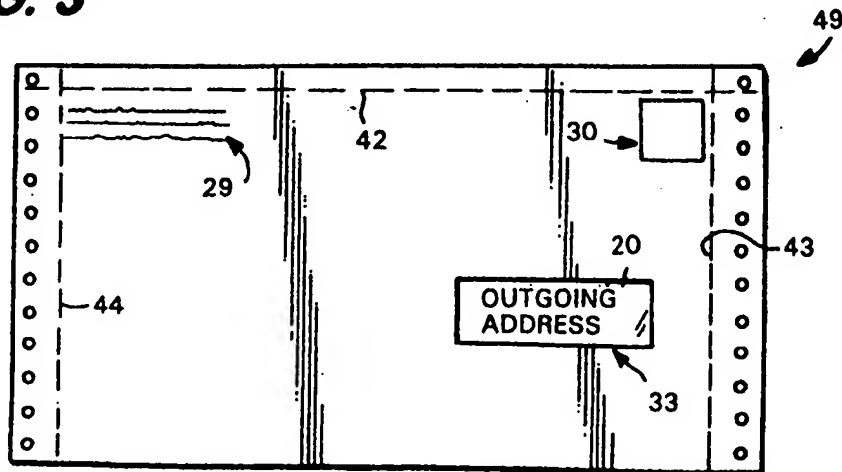
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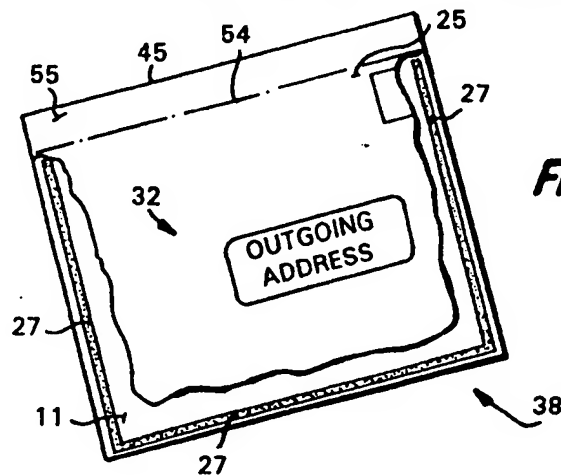
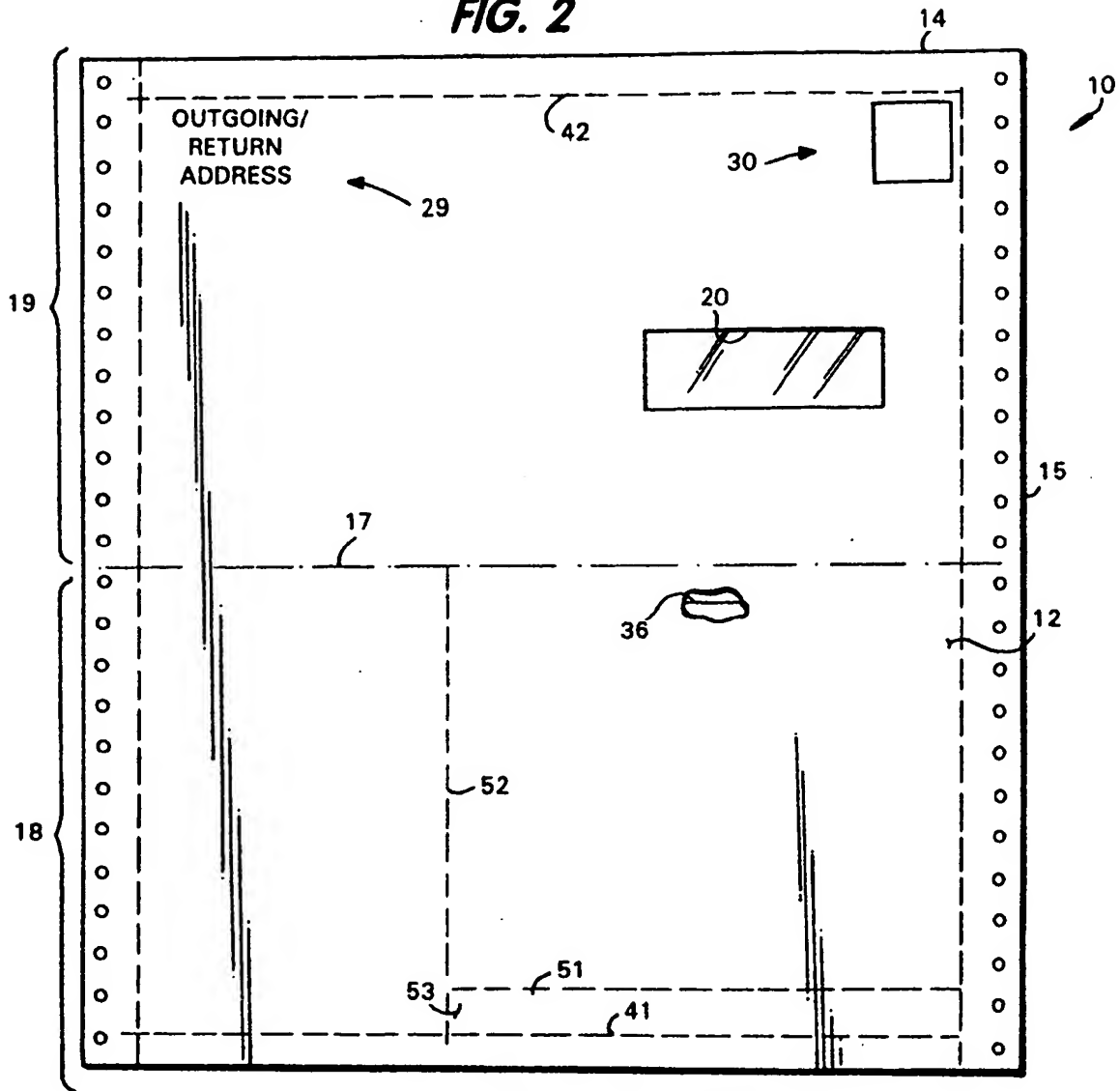
**FIG. 1**



**FIG. 3**



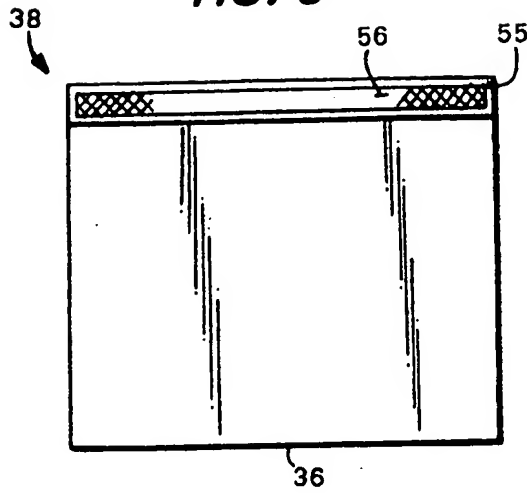
**FIG. 2**



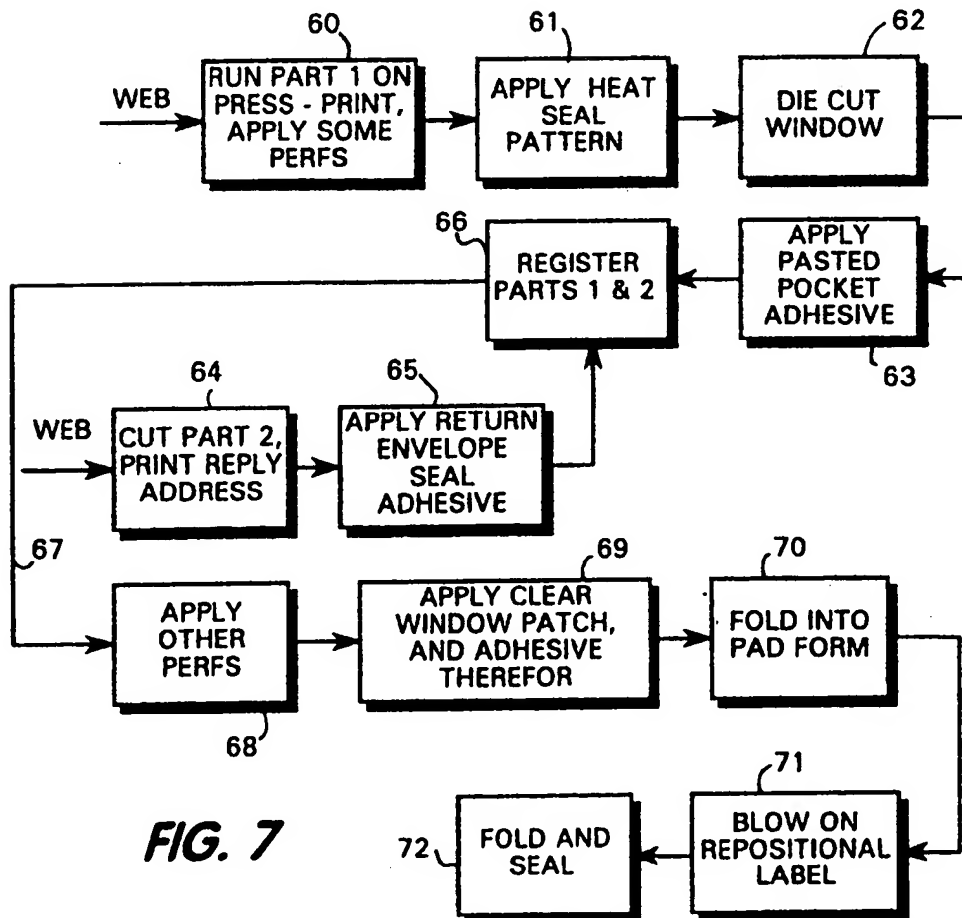
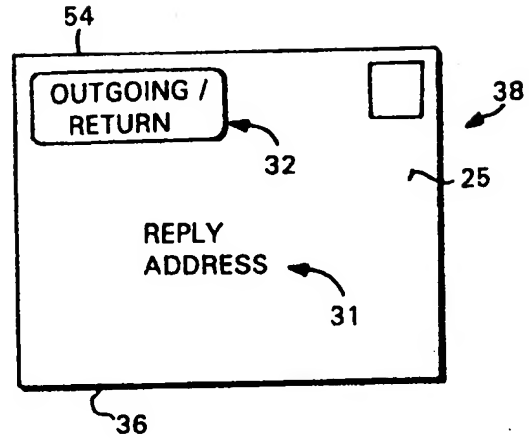
**FIG. 4**



**FIG. 5**



**FIG. 6**



**FIG. 7**



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 94 30 0478

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. CL.5)
A	US-A-5 125 563 (LOMBARDO) 30 June 1992 * column 3, line 47 - column 4, line 17; figures 1-4 *	1-4, 7, 11	B65D27/06
A	US-A-4 148 430 (DRAKE) 10 April 1979 * column 3, line 57 - column 10, line 12; figures 1-17 *	1, 2, 4-7, 10-12	
A, D	US-A-4 706 877 (JENKINS) 17 November 1987 * column 5, line 8 - column 6, line 34; figures 1-8 * * column 7, line 1 - line 7 *	1, 2, 4-8, 11-13	
The present search report has been drawn up for all claims			<b>TECHNICAL FIELDS SEARCHED (Int. CL.5)</b> B65D
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>22 April 1994</b>	Examiner <b>Vollering, J</b>
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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